

THE LONG ISLAND SUBSECTION  
OF  
THE NEW YORK AMERICAN CHEMICAL SOCIETY

Proudly presents

**Dr. Mark R Biscoe,**

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**Title of Talk:** “Rethinking asymmetric synthesis: The development of general metal-catalyzed cross-coupling reactions that enable the use of optically reactive nucleophiles.”

**Synopsis:** The development of transition metal-catalyzed cross-coupling reactions has greatly influenced the manner in which the synthesis of complex organic molecules is approached. A wide variety of methods are now available for the formation of  $C(sp^2)-C(sp^2)$  bonds, and more recent work has focused on the use of  $C(sp^3)$  electrophiles and nucleophiles. The use of secondary alkyl nucleophiles in cross-coupling reactions remains an outstanding challenge because of the propensity of these alkyl groups to isomerize under the reaction conditions. In principle, enantioenriched secondary alkyl organometallic nucleophiles can undergo cross-coupling reactions with transfer of the original stereochemistry, thus enabling a new approach to the preparation of enantioenriched molecules. In this seminar, we will describe new methods for the use of configurationally stable, optically active alkyltin and alkylboron nucleophiles in stereospecific Pd-catalyzed cross-coupling reactions. Such processes enable the rapid generation of libraries of non-racemic drug candidates from a single optically active precursor.

**All are welcome!**

**When:** Thursday, October 4th, 2018

**Where:** Queensborough Community College, Science Building Rm S-112

**Time:** 5:30 p.m. – Social w/ Light Refreshments; 6:00 pm – Seminar Start

**Directions:** <http://www.qcc.cuny.edu/about/driving.html>

**After Seminar Dinner:** At a nearby restaurant, \$25 per person.



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